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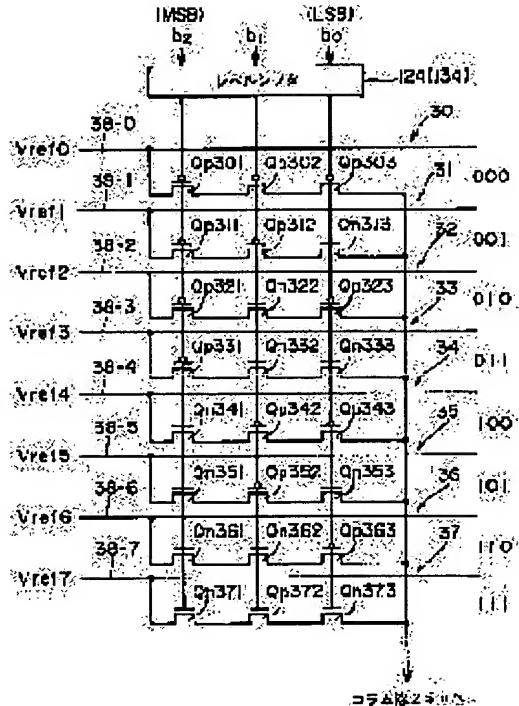
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(54) DIGITAL-ANALOG CONVERTING CIRCUIT AND LIQUID CRYSTAL DISPLAY DEVICE MOUNTING THE CIRCUIT

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a DA converting circuit which requires a small number of components composing the circuit and can contribute to narrowing the frame width of a LCD panel, and a liquid crystal display device mounting the circuit.

SOLUTION: In the reference voltage selective AD converting circuit in a liquid crystal display device integral with a driving circuit, each of three pieces of analog switches of polarities corresponding to each bit logic of, for example, three bits (b2, b1, b0) of data is formed of one piece of conductive (P-channel/N- channel) MOS transistor corresponding to each bit logic, and these are connected in series to form gradation selecting units 30-37 for as many as 8 gradations. And, these gradation selecting units 30-37 are connected across reference voltage lines 38-0 to 38-7 for as many as 8 gradations and the column line 25n, respectively.



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